

WHAT IS CLAIMED IS:

1. A watercraft comprising a propulsion device arranged to propel the watercraft, a prime mover that powers the propulsion device, a regulating device that regulates an output of the prime mover, the watercraft capable of proceeding generally at a speed corresponding to the output of the prime mover, a command input device configured to provide a command signal to control the regulating device, a speed sensing device configured to sense an actual speed of the watercraft and to provide an actual speed signal, a control device configured to control the regulating device, a control data input device configured to selectively provide the control device with a first mode signal that starts a first mode of the control device and a second mode signal that starts a second mode of the control device, the first mode being a manual control mode in which a human operator manually controls a speed of the watercraft, and the second mode being a mode in which the speed is controlled automatically, the second mode signal accompanied by a target speed signal indicative of a target speed of the watercraft, the control device controlling the regulating device based upon the command signal in the first mode, the control device controlling the regulating device in the second mode such that an actual speed of the watercraft designated by the actual speed signal generally corresponds with the target speed of the watercraft designated by the target speed signal, and the control device starting the first mode in place of the second mode without the first mode signal if the command signal changes while the control device controls the regulating device in the second mode.

2. The watercraft as set forth in Claim 1, wherein the control device starts the first mode in place of the second mode when the command signal changes over a preset magnitude.

3. The watercraft as set forth in Claim 1, wherein the control device starts the first mode in place of the second mode when a difference between a command amount designated by the command signal and a command reference amount is equal to or greater than a preset magnitude.

4. The watercraft as set forth in Claim 3, wherein the command reference amount is another command amount that is designated by another command signal that has been previously provided.

5. The watercraft as set forth in Claim 1, wherein the control device holds the first mode when the control device changes the second mode to the first mode without the first mode signal.

6. The watercraft as set forth in Claim 1, wherein the second mode signal is canceled afterwards when the control device changes the second mode to the first mode without the first mode signal.

7. The watercraft as set forth in Claim 1, wherein the control data input device comprises a mode selector through which the first and second mode signals are selectively provided to the control device.

8. The watercraft as set forth in Claim 7, wherein the control data input device additionally comprises a data input unit, the target speed signal is inputted by the data input unit.

9. The watercraft as set forth in Claim 7, wherein the control data input device automatically returns the mode selector to a position in which the mode selector provides the first mode signal.

10. The watercraft as set forth in Claim 9 additionally comprising a switch actuator, the mode selector including a switch movable between a first mode position corresponding to the first mode and a second mode position corresponding to the second mode, the switch actuator coercively returning the switch to the first mode position.

11. The watercraft as set forth in Claim 1, wherein the control device controls the regulating device such that the actual speed of the watercraft gradually approaches the target speed of the watercraft.

12. The watercraft as set forth in Claim 1 additionally comprising a network system that has multiple nodes communicating with each other, the network system at least including a first node for the command input device, a second node for the speed sensing device, a third node for the control device, and a fourth node for the control data input device.

13. The watercraft as set forth in Claim 1, wherein the prime mover is an engine, and the regulating device comprises a throttle valve unit that regulates an amount of air to the engine, the control device controls a position of the throttle valve unit.

14. A watercraft comprising a propulsion device arranged to propel the watercraft, a prime mover that powers the propulsion device, a regulating device that regulates an output of the prime mover, the watercraft capable of proceeding generally at a speed corresponding to the output of the prime mover, a command input device configured to provide a command signal to control the regulating device, a speed sensing device configured to sense an actual speed of the watercraft to provide an actual speed signal, a control device configured to control the regulating device, a control data input

device configured to selectively provide the control device with a first mode signal that starts a first mode of the control device and a second mode signal that starts a second mode of the control device, the second mode signal associated with by a target speed signal indicative of a target speed of the watercraft, the control device controlling the regulating device based upon the command signal in the first mode, the control device controlling the regulating device in the second mode such that an actual speed of the watercraft designated by the actual speed signal generally corresponds with a target speed of the watercraft designated by the target speed signal, and the control device controlling the regulating device based upon the command signal if the command signal changes while the control device controls the regulating device in the second mode.

15. A watercraft comprising a propulsion device arranged to propel the watercraft, an engine that powers the propulsion device, an air intake device arranged to deliver air to the engine, a throttle valve unit that regulates an amount of the air, an output of the engine generally varying in response to the amount of the air, the watercraft capable of proceeding generally at a speed corresponding to the output of the engine, a command input device configured to provide a command signal indicative of a position of the throttle valve unit, a speed sensing device configured to sense an actual speed of the watercraft and to provide an actual speed signal, a control device configured to control the throttle valve unit, a control data input device configured to selectively provide the control device with a first mode signal that starts a first mode of the control device and a second mode signal that starts a second mode of the control device, the second mode signal associated with by a target speed signal indicative of a target speed of the watercraft, the control device controlling the throttle valve unit based upon the command signal in the first mode, the control device controlling the throttle valve unit in the second mode such that an actual speed of the watercraft designated by the actual speed signal generally corresponds with the target speed of the watercraft designated by the target speed signal, and the control device starting the first mode in place of the second mode without the first mode signal if the command signal changes while the control device controls the throttle valve unit in the second mode.

16. The watercraft as set forth in Claim 15, wherein the control device controls the position of the throttle valve unit using a position control amount calculated based upon the actual speed of the watercraft and the target speed of the watercraft in the second mode.

17. The watercraft as set forth in Claim 16, wherein the control device determines whether a difference between the position control amount and another position control amount that has been calculated previously is greater than a preset control amount threshold, the control device controls the throttle valve unit using the position control amount if the position control amount is equal to or less than the preset control amount threshold or another position control amount that does not exceed the preset position control amount threshold if the position control amount is greater than the preset control amount threshold.

18. The watercraft as set forth in Claim 16 additionally comprising a control amount threshold setting device configured to set a plurality of the preset control amount thresholds.

19. The watercraft as set forth in Claim 15 additionally comprising a position sensing device configured to sense an actual position of the throttle valve unit, the control device controlling the position of the throttle valve unit using a position control amount calculated based upon the command signal provided by the command input device and the actual position sensed by the position sensing device in the first mode.

20. The watercraft as set forth in Claim 15, wherein the throttle valve unit comprises a throttle valve and a throttle valve actuator arranged to actuate the throttle valve.

21. A velocity control system for a watercraft comprising a command input device configured to provide a command signal to control a regulating device that regulates an output of a prime mover of the watercraft, a speed sensing device configured to sense an actual speed of the watercraft to provide an actual speed signal, a control device configured to control the regulating device, a control data input device configured to selectively provide the control device with a first mode signal that starts a first mode of the control device and a second mode signal that starts a second mode of the control device, the second mode signal accompanied by a target speed signal indicative of a target speed of the watercraft, the control device controlling the regulating device based upon the command signal in the first mode, the control device controlling the regulating device in the second mode such that an actual speed of the watercraft designated by the actual speed signal generally corresponds to the target speed of the watercraft designated by the target speed signal, and the control device starting the first mode in place of the second mode without the first mode signal if the command signal changes while the control device controls the regulating device in the second mode.

22. A computer-implemented control method for controlling a speed of a watercraft comprising regulating an output of a prime mover that powers a propulsion device of the watercraft, generating a command signal, sensing an actual speed of the watercraft to generate an actual speed signal, generating a first mode signal that starts a first mode, generating a second mode signal that starts a second mode, generating a target speed signal indicative of a target speed of the watercraft, controlling the regulation of the output of the prime mover based upon the command signal in the first mode, controlling the regulation of the output of the prime mover in the second mode such that an actual speed designated by the actual speed signal generally coincides with a target speed designated by the target speed signal, determining whether the command signal changes while controlling the regulation of the output of the prime mover in the second mode, and starting the first mode in place of the second mode without the first mode signal if the determination is positive.

23. The control method as set forth in Claim 22 additionally comprising comparing a difference between a command amount designated by the command signal and a command reference amount with a preset magnitude, the first mode started if the difference is equal to or greater than the preset magnitude in addition to that the determination is positive.

24. The control method as set forth in Claim 22 additionally comprising holding the first mode when the first mode is started without the first mode signal.

25. The control method as set forth in Claim 22 additionally comprising canceling the second mode signal afterwards when the first mode is started without the first mode signal.

26. The control method as set forth in Claim 22 additionally comprising controlling the regulation of the output of the prime mover such that the actual speed of the watercraft gradually approaches the target speed of the watercraft.

27. The control method as set forth in Claim 22, wherein the prime mover is an engine, additionally comprising varying an amount of air to the engine to regulate the output of the engine.

28. The control method as set forth in Claim 27 additionally comprising changing a position of a throttle valve to vary the amount of the air.

29. The control method as set forth in Claim 28 additionally comprising calculating a position control amount of the throttle valve based upon the actual speed of

the watercraft and the target speed of the watercraft, and controlling the position of the throttle valve using the position control amount in the second mode.

30. The control method as set forth in Claim 28 additionally comprising determining whether the position control amount is greater than a preset control amount threshold, and controlling the throttle valve using the position control amount if the position control amount is equal to or less than the preset control amount or another position control amount that does not exceed the preset position control amount threshold if the position control amount is greater than the preset position control amount.

31. The control method as set forth in Claim 28 additionally comprising sensing an actual position of the throttle valve to generate an actual position signal, calculating a position control amount of the throttle valve based upon the command signal and the actual position signal, and controlling the position of the throttle valve using the position control amount in the first mode.

32. A control method for controlling a speed of a watercraft comprising regulating an output of a prime mover that powers a propulsion device of the watercraft, generating a command signal, sensing an actual speed of the watercraft to generate an actual speed signal, generating a first mode signal that starts a first mode, generating a second mode signal that starts a second mode, generating a target speed signal indicative of a target speed of the watercraft, controlling the regulation of the output of the prime mover based upon the command signal in the first mode, controlling the regulation of the output of the prime mover in the second mode such that an actual speed designated by the actual speed signal generally coincides with a target speed designated by the target speed signal, determining whether the command signal changes while controlling the regulation of the output of the prime mover in the second mode, and controlling the regulation of the output of the prime mover based upon the command signal if the determination is positive.